

0590
02/3

#9



ENTERED

OIPE

RAW SEQUENCE LISTING

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:06

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

4 <110> APPLICANT: Bowen, Benjamin A.
 5 Deakin, Edward
 6 Goldsmith, Neil
 7 Haudenschild, Christian
 8 Houck, David
 9 McAlpine, James B.
 10 Neilsen, Soren
 11 Pazoles, Christopher
 12 Spencer, Marget E.
 13 Stafford, Angela
 15 <120> TITLE OF INVENTION: Methods for Identifying Genes Regulating
 16 Desired Cell Phenotypes
 19 <130> FILE REFERENCE: 50273/005002
 21 <140> CURRENT APPLICATION NUMBER: US 10/056,479A
 C--> 22 <141> **CURRENT FILING DATE: 2003-02-07**
 24 <150> PRIOR APPLICATION NUMBER: US 60/263,807
 25 <151> PRIOR FILING DATE: 2001-01-24
 27 <160> NUMBER OF SEQ ID NOS: 15
 29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 31 <210> SEQ ID NO: 1
 32 <211> LENGTH: 216
 33 <212> TYPE: PRT
 34 <213> ORGANISM: Artificial Sequence
 36 <220> FEATURE:
 37 <223> OTHER INFORMATION: Synthetic
 39 <400> SEQUENCE: 1
 40 Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg Asn Lys Ala Ile
 41 1 5 10 15
 42 His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val Ser Met Asp Asn
 43 20 25 30
 44 Thr Arg Leu Ala Leu Ala Ala Ile Gly Lys Leu Met Phe Ala Gln Phe
 45 35 40 45
 46 Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu Pro Ser Asn Leu
 47 50 55 60
 48 Ser Gly Ser Arg Asn Pro Ser Leu Asp Tyr Gly Leu Lys Gly Ala Glu
 49 65 70 75 80
 50 Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Phe Leu Gly Asn Pro
 51 85 90 95
 52 Val Thr Asn His Val Gln Ser Ala Glu Gln His Asn Gln Asp Val Asn
 53 100 105 110
 54 Ser Leu Gly Leu Ile Ser Ser Arg Lys Thr Ala Glu Ala Val Asp Ile
 55 115 120 125
 56 Leu Lys Leu Met Thr Ser Thr Tyr Leu Val Ala Leu Cys Gln Ala Val

RAW SEQUENCE LISTING

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:06

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

```

57      130      135      140
58 Asp Leu Arg His Met Glu Glu Asn Leu Arg Asn Thr Val Lys Asn Thr
59 145      150      155      160
60 Val Ser Gln Val Ala Lys Arg Thr Leu Thr Thr Gly Ala Asn Gly Glu
61      165      170      175
62 Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu Lys Val Val Asp
63      180      185      190
64 Arg Glu Tyr Val Phe Ala Tyr Ile Asp Asp Pro Cys Leu Ala Thr Tyr
65      195      200      205
66 Pro Leu Met Gln Ser Leu Gly Ala
67      210      215
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 648
72 <212> TYPE: DNA
73 <213> ORGANISM: Artificial Sequence
75 <220> FEATURE:
76 <223> OTHER INFORMATION: Synthetic
78 <400> SEQUENCE: 2
79 tctgtcaacg acaaccggtt gatcgatgtc tcgaggaaca aggccatcca tgggtggaaac 60
80 ttccaaggaa ccccgatcgg tgtgtccatg gacaacacca ggctagcact ggcagctatt 120
81 ggggaagctca tgtttgctca gttctccgag cttgtcaatg acttctacaa caatggctctg 180
82 ccacgaatc tgtctggcag caggaacccc agcttgact atgggcttaa aggagcggag 240
83 atcgcaatgg cttcctactg ttccgarctt cagttccttg gtaaccgggt tactaaccat 300
84 gtccagagcg ctgagcagca taaccaggat gtcaactcat tgggattgat ctcataagg 360
85 aagacagctg aagctgttga catcttgaag ctcatgacat cgacttactt ggtggccctt 420
86 tgccaagctg ttgacctgag gcacatggaa gagaatctta ggaacactgt gaagaacacc 480
87 gtgagccaag tcgccaagag gacgctcacm acaggagcca acggtgagct tcacccatcg 540
88 agattctgcg agaaggactt gctcaaagtr gttgacagag agtatgtgtt cgcgtacatt 600
89 gatgaccctt gcctggcaac ttaccctctg atgcaaagct taggggct 648
91 <210> SEQ ID NO: 3
92 <211> LENGTH: 117
93 <212> TYPE: PRT
94 <213> ORGANISM: Artificial Sequence
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Synthetic
99 <400> SEQUENCE: 3
100 Glu Asn Asn Lys Gly Ala Arg Val Leu Val Ile Cys Ser Glu Ile Thr
101 1      5      10      15
102 Ala Val Thr Phe Arg Gly Pro Ser Asp Thr His Leu Tyr Ser Leu Val
103      20      25      30
104 Gly Gln Ala Leu Phe Gly Asp Gly Ala Ala Ala Val Ile Leu Gly Ala
105      35      40      45
106 Asp Pro Leu Pro Glu Glu Lys Pro Met Phe Glu Leu Val Ser Ala Ala
107      50      55      60
108 Gln Thr Ile Leu Pro Asp Ser Glu Gly Ala Ile Asp Gly His Leu Ser
109 65      70      75      80
110 Glu Val Gly Leu Thr Phe His Leu Leu Lys Asp Val Pro Gly Leu Ile
111      85      90      95
112 Ser Lys Asn Ile Glu Lys Gly Leu Val Glu Ala Phe Lys Pro Ile Gly

```

RAW SEQUENCE LISTING

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:06

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

```

113          100          105          110
114 Ile Glu Asp Gly Thr
115          115
118 <210> SEQ ID NO: 4
119 <211> LENGTH: 353
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <221> NAME/KEY: misc_feature
125 <222> LOCATION: 183
126 <223> OTHER INFORMATION: n = A,T,C or G
128 <223> OTHER INFORMATION: Synthetic
W--> 130 <400> 4
131 gagaacaaca agggcgctcg cgtgttggtg atttgctctg agatcactgc tgttaccttc 60
132 cgtggcccaa gcgatactca tttgtacagt cttgtaggtc aggccttggt cggagacgga 120
133 gctgcagcag tcatcctcgg agcagacccc cttcccgaag agaagcccat gtttgaactt 180
W--> 134 gtntctgcag ctcagaccat cttgccagac agtgaaggcg ccatcgacgg tcatcttagt 240
135 gaagtttggtc tcacattcca tttgcttaag gacgttcccg ggctgatctc caagaacatt 300
136 gagaagggtc tagtcgaggc attcaagcct atcggtatcg aagacggaac tca 353
138 <210> SEQ ID NO: 5
139 <211> LENGTH: 122
140 <212> TYPE: PRT
141 <213> ORGANISM: Artificial Sequence
143 <220> FEATURE:
144 <221> NAME/KEY: VARIANT
145 <222> LOCATION: 52
146 <223> OTHER INFORMATION: Xaa = Any Amino Acid
148 <223> OTHER INFORMATION: Synthetic
W--> 150 <400> 5
151 Pro Glu Ala Val Lys Asp Trp Arg Glu Ile Val Thr Tyr Phe Ser Tyr
152 1          5          10          15
153 Pro Val Ser Ala Arg Asp Tyr Ser Arg Trp Pro Asp Lys Pro Glu Ala
154          20          25          30
155 Trp Lys Glu Val Thr Lys Arg Tyr Ser Asp Thr Leu Met Gly Leu Ala
156          35          40          45
W--> 157 Cys Lys Leu Xaa Glu Val Leu Ser Glu Ala Met Gly Leu Glu Lys Glu
158          50          55          60
159 Ala Leu Thr Lys Ala Cys Val Asp Met Asp Gln Lys Val Val Val Asn
160 65          70          75          80
161 Tyr Tyr Pro Lys Cys Pro Glu Pro Asp Leu Thr Leu Gly Leu Lys Arg
162          85          90          95
163 His Thr Asp Pro Gly Thr Ile Thr Leu Leu Leu Gln Asp Gln Val Gly
164          100          105          110
165 Gly Leu Gln Ala Thr Arg Asp Asp Gly Lys
166          115          120
169 <210> SEQ ID NO: 6
170 <211> LENGTH: 368
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial Sequence

```

RAW SEQUENCE LISTING

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:06

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

```

174 <220> FEATURE:
175 <223> OTHER INFORMATION: Synthetic
177 <400> SEQUENCE: 6
178 cccgaggcag tgaaggaytg gcgtgagatt gtgacttact tctcataccc ggtctcagcc 60
179 agggactact cacgctggcc ggacaagcct gaggcctgga aggaggtgac caagcgttac 120
180 agcgacacgc tgatgggtct ggcatgtaag cttsttagagg tcttatctga agcgatggga 180
181 ctagagaagg aggcctctgac taaggcctgt gttgacatgg accagaaagt tgttgtcaac 240
182 tactaccca agtgtcctga gcctgatcta actttgggac tcaagaggca taccgacccc 300
183 gggacgatca ccttgcttct ccaggaccaa gttggcgggc ttcaggccac tagagatgat 360
184 ggtaagac
186 <210> SEQ ID NO: 7
187 <211> LENGTH: 23
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Synthetic
194 <400> SEQUENCE: 7
195 gartayaayc cvaagcgttt tgc
197 <210> SEQ ID NO: 8
198 <211> LENGTH: 22
199 <212> TYPE: DNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Synthetic
205 <400> SEQUENCE: 8
206 ggrrakatgt tytcraaggc rg
208 <210> SEQ ID NO: 9
209 <211> LENGTH: 26
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Synthetic
216 <400> SEQUENCE: 9
217 atgatgtacc arcargggtg cttygc
219 <210> SEQ ID NO: 10
220 <211> LENGTH: 21
221 <212> TYPE: DNA
222 <213> ORGANISM: Artificial Sequence
224 <220> FEATURE:
225 <223> OTHER INFORMATION: Synthetic
227 <400> SEQUENCE: 10
228 agcccgggaa cgtccttaag c
230 <210> SEQ ID NO: 11
231 <211> LENGTH: 25
232 <212> TYPE: DNA
233 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: Synthetic
238 <400> SEQUENCE: 11

```

RAW SEQUENCE LISTING

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:06

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

```

239 gtsaacgaca accckttgat cgatg                25
241 <210> SEQ ID NO: 12
242 <211> LENGTH: 23
243 <212> TYPE: DNA
244 <213> ORGANISM: Artificial Sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: Synthetic
249 <400> SEQUENCE: 12
250 acttggctca csgtggttctt sac                23
252 <210> SEQ ID NO: 13
253 <211> LENGTH: 24
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Synthetic
260 <400> SEQUENCE: 13
261 gaaggagggtg accaagcggtt acag                24
263 <210> SEQ ID NO: 14
264 <211> LENGTH: 25
265 <212> TYPE: DNA
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Synthetic
271 <400> SEQUENCE: 14
272 tggcctgaag cccgccaaact tggtc                25
274 <210> SEQ ID NO: 15
275 <211> LENGTH: 18
276 <212> TYPE: DNA
277 <213> ORGANISM: Artificial Sequence
279 <220> FEATURE:
280 <223> OTHER INFORMATION: Synthetic
282 <400> SEQUENCE: 15
283 tttttttttt tttttttt                        18

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 02/12/2003
PATENT APPLICATION: US/10/056,479A TIME: 12:31:07

Input Set : A:\50273.005002.SEQLIST.TXT
Output Set: N:\CRF4\02122003\J056479A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 183

Seq#:5; Xaa Pos. 52

VERIFICATION SUMMARY

DATE: 02/12/2003

PATENT APPLICATION: US/10/056,479A

TIME: 12:31:07

Input Set : A:\50273.005002.SEQLIST.TXT

Output Set: N:\CRF4\02122003\J056479A.raw

L:22 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:130 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
L:134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:180
L:150 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5
L:157 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:48